REMARKS/ARGUMENTS

Claims 10, 12-17, and 19-26 remain in this application. Claims 11 and 18 have been previously canceled. Claims 1- 9 stand withdrawn. Claims 23-26 are canceled herein to reduce the issues.

1. §103 Rejection on Smith (The Wealth of Nations Book 1, Chapter 1)

The Examiner has rejected claims 10, 12-17, and 19-26 under 35 U.S.C. 103(a) as being unpatentable over Applicant's Prior Art Teachings (PAT) in view of Smith (The Wealth of Nations Book 1, Chapter 1).

Respectfully, the rejection of claims 10, 12-17 and 19-26 is traversed.

Summary of the Invention

In one broad aspect, the present invention is a method for manufacturing an optical fiber perform wherein the optical fiber perform is pre-gobbed offline by heating the preform in a furnace chamber of a pre-gobbing apparatus until a gob drops thereform under the influence of heat and gravity. The gob is dropped under conditions such that glass is removed from the perform to achieve a pre-optimized draw tip shape; preferably having a tip taper ratio of 5 to 12. After the pregobbing step, the pre-optimized preform is transferred to a separate draw apparatus wherein the pre-gobbing furnace and the draw furnace have temperature profiles in their respective hot zones which are preferably substantially identical or substantially equal. Advantageously, a preform is derived which already has the trash glass removed and a pre-optimized tip shape such that drawing may be more rapidly commenced as compared to the PAT. Accordingly, the draw apparatus may be more fully and effectively utilized.

Characterization of PAT and Smith

PAT teaches a conventional prior art drawing method wherein the gob drop takes place within the draw furnace and thereafter fiber draw is commenced within the same draw furnace. Smith teaches, broadly and generally, the concept of division of labor, i.e., reducing every man's business to some one simple operation thereby increasing the dexterity of the workman, saving time in passing work to another.

Smith Teaching Is General, Vague To Provide Needed Motivation to Combine

Examiner relies upon Smith for providing the motivation for taking the gob drop and tip shape forming step offline. And further argues it would have been obvious to provide profiles which are substantially identical – but, in fact, admits Smith does not teach or suggest this.

Applicant's assert that Smith is a general theoretical teaching, is extremely vague, and provides no specific guidance as to how one might modify a conventional PAT fiber draw process to improve the efficiency thereof. Smith is nothing more than a broad conceptual document, teaching the broad concept of division of labor. It is clear from the case law when a suggestion is so broad as to suggest a virtually endless number of possibilities, the search ends up being no more than an opportunity for the exercise of impermissible hindsight reasoning. Very applicable to the facts in this case are In re Deuel which stands for the proposition that more than "general guidance" is needed to render a technique obvious. Even assuming arguendo that a person of ordinary skill in the art would be aware of Smith, its general suggestion that one may divide any process into its component parts is simply "too general" to provide the needed suggestion or motivation to modify the PAT. In particular, 1) there is no suggestion in Smith to suggest any particular part of the fiber draw process should be taken off line, and 2) there is no suggestion as to the type of device that might be employed should pregobbing be taken off line. Relating to 1), there are many sub-processes within the draw process, including preform loading, heating, down feed, gobbing, threading, measurement, cooling, coating, curing, testing, inspection and winding. Although admittedly not an endless number of possibilities, Smith offers no suggestion as to which one might be effective if performed

off line. Accordingly, Smith offers nothing more than an excuse for utilizing improper hindsight reasoning.

Relating to 2), Examiner should recognize that previously cited JP 2598339, for example, teaches that a preform may be pre-treated before the preform is sent to the drawing process wherein the preform end is separated with a burner and formed into a tip end shape. Previously cited JP 61251536 teaches the V-shape is formed by an oxyhydrogen burner and previously cited JP 7330362 teach heating the preform end with a burner and contacting the preform end with a trowel. Accordingly, each of these prior art references teach using a burner. None of these references include a temperature profile that is substantially identical to that of the draw furnace in that these prior art references each include a locally hotter zone (on one side of the preform) where the burner flame contacts the preform tip. One clear indicia of non-obviousness is the existence of prior methods which utilize a different method than taught in the instant specification to solve a similar problem. Furthermore, each of these prior art methods have drawbacks in terms of possible contamination of the preform tip and tip shapes that may be less than optimum for prompt initiation of drawing. These problems are overcome by Applicant's invention.

Combinability Not Clear and Particular

In order to render an invention obvious, the showing of combinability must be "clear and particular." In re Deuel, 34 USPQ 2d, 1210, 1216 (Fed. Cir. 1995). In the present case, Smith provides only a broad theoretical suggestion. No specific guidance of how to apply the division of labor theory to particular problems is given. Further, there is no suggestion in Smith that it could be applied to the process of fiber making. Accordingly, Smith, being far too general, does not provide the required "clear suggestion" to modify PAT in the manner suggested by the Examiner. Nothing in the PAT or Smith references alone or together suggests the claimed invention as a solution to the problem of reducing draw time by utilizing substantially identical temperature profiles. Thus, the prior art makes no suggestion, clear or otherwise, of the claimed

invention or otherwise suggest the desirability of using substantially identical temperature profiles. Accordingly, the rejection is flawed and should be withdrawn.

Examiner's rejection Amounts to "Obviousness To Try" Hindsight Reasoning

The Examiner's standard amounts to improper "obvious to try" analysis. In re Fine, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1599 (Fed. Cir. 1988). "The case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references." In re Dembiczak, 175 F.3d 994, 999 [50 USPQ2d 1614] (Fed. Cir. 1999). In particular, the admonition against "obvious to try" has been directed to exploring a general approach that seemed to be a promising, where the prior art gave only "general guidance" as to the particular form of the claimed invention or how to achieve it. In re Dow Chemical Co., 837 F.2d, 469, 473, 5 USPQ2d 1529, 1532 (Fed. Cir. 1985).

In the present case, Applicant recognized the time savings and cost advantages of off-line pre-gobbing and designed a suitable off-line apparatus including a temperature profile which is substantially identical to that of the draw furnace and method for efficiently accomplishing this. In particular, the method includes heating and dropping a gob in a pre-gobbing furnace having a temperature profile which is substantially identical to that of the draw furnace. Neither PAT nor Smith mentions this method, nor the desirability of doing this. There is no particular form of the claimed invention suggested by Smith or any suggestion of how to achieve such pre-gobbing. Smith offers only "general guidance" and, such broad theory, does not provide the needed motivation. In particular, only the Applicant's disclosure describes a method wherein the gob is dropped in a furnace having substantially identical temperature profile to form a pre-optimized tip. Examiner is clearly utilizing hindsight reasoning to contrive a rejection by utilizing Applicant's disclosure as the only blueprint for making the rejection. Accordingly, the rejection of claims 10, 12-17 and 19-26 under 35 U.S.C. § 103(a) should be withdrawn.

Applicants Invention Renders New Results

Applicant's method claimed herein renders new results. In particular, by moving the pre-gobbing off line and including a temperature profile which is substantially identical to the draw apparatus, the down time needed in the PAT to drop the gob and shape the draw tip is reduced. Thus, to the extent that the Examiner has attempted to make the present situation fit into the mold of making a process automatic, making something smaller, larger, automatic, integral, etc., any equivalency is overcome by the showing of new results.

Invention's Simplicity Should Not be Used To Negative Invention

Examiner should recognize that simplicity alone cannot be determinative of obviousness. See Gentry Gallery, Inc. v. Berkline Corp., 134 F.3d 1473, 1478 [45 USPQ2d 1498] (Fed. Cir. 1998). The standard of obviousness is not whether in hindsight, it seems elementary that someone would have combined these certain elements in the prior art to form the invention in question. See. e.g., W.L. Gore & Assoc., Inc. v. Garlock , Inc., 721 F.2d 1540, 1551 [220 USPQ 303] (Fed. Cir. 1983). Hindsight is almost always perfect. It is insufficient to prove that at the time of the claimed invention, the separate elements of the device were present in the known art. Rather, there must have been some explicit teaching or suggestion in the art to motivate one of even ordinary skill to combine such elements so as to create the same invention. In this case, nothing in the prior art suggests the desirability that the pre-gobbing step should take place off-line and in a furnace having a substantially identical temperature profile to that of the draw furnace.

Claims 23-26 have been canceled to reduce the issues.

Based upon the above amendments, remarks, and papers of records, applicant believes the pending claims of the above-captioned application are in allowable form and

patentable over the prior art of record. Applicant respectfully requests that a timely Notice of Allowance be issued in this case. Applicant believes that no extension of time is necessary to make this Reply timely. Should applicant be in error, applicant respectfully requests that the Office grant such time extension pursuant to 37 C.F.R. § 1.136(a) as necessary to make this Reply timely, and hereby authorizes the Office to charge any necessary fee or surcharge with respect to said time extension to the deposit account of the undersigned firm of attorneys, Deposit Account 03-3325.

Please direct any questions or comments to Randall S. Wayland at 607-974-0463.

Respectfully submitted,

DATE: 2-24-04

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